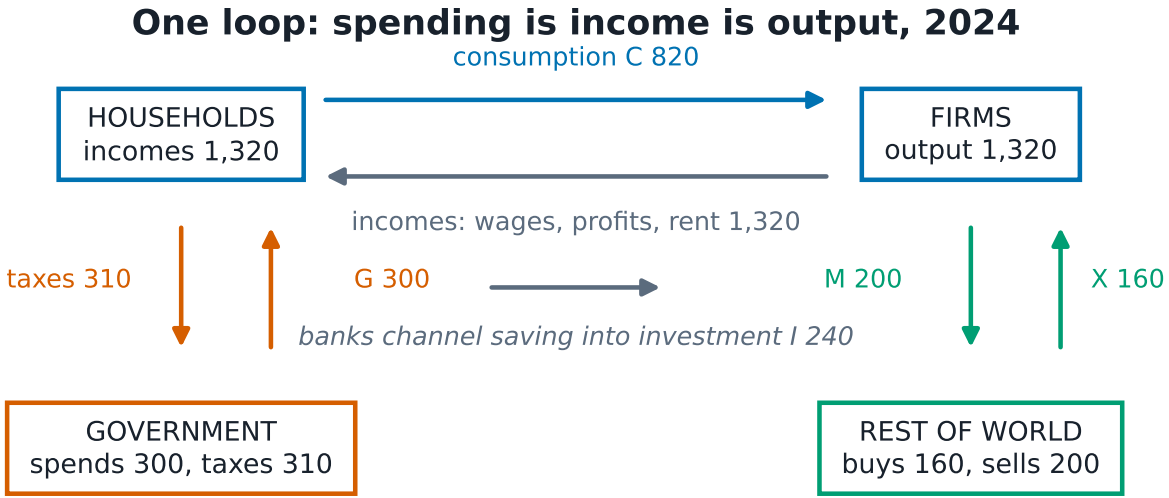
Exercise walk-through

4.4
Money and banking

University Business

National accounts: the loop closes at 1,320

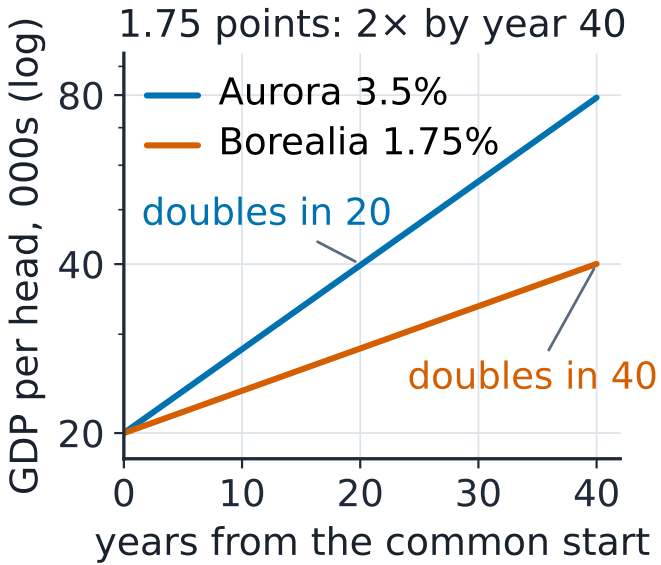


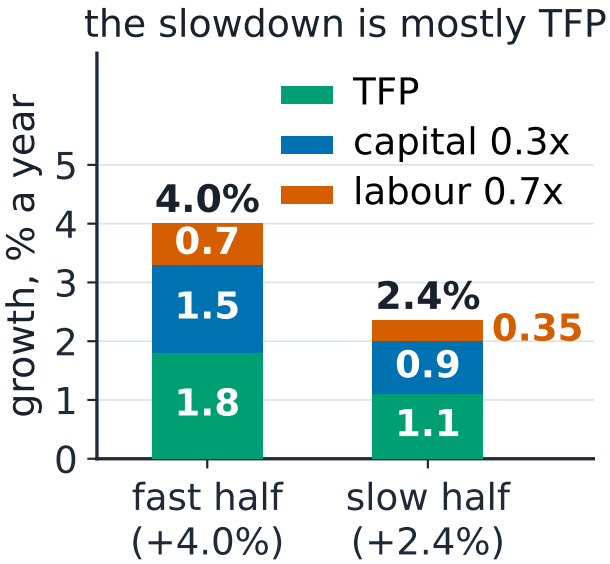
Y = 820 + 240 + 300 + 160 - 200 = 1,320 (both sides close)

C + I + G + X - M = 1,320, and income closes at the same 1,320.

Growth: small rates, compounded

Small growth gaps compound, and where they come from

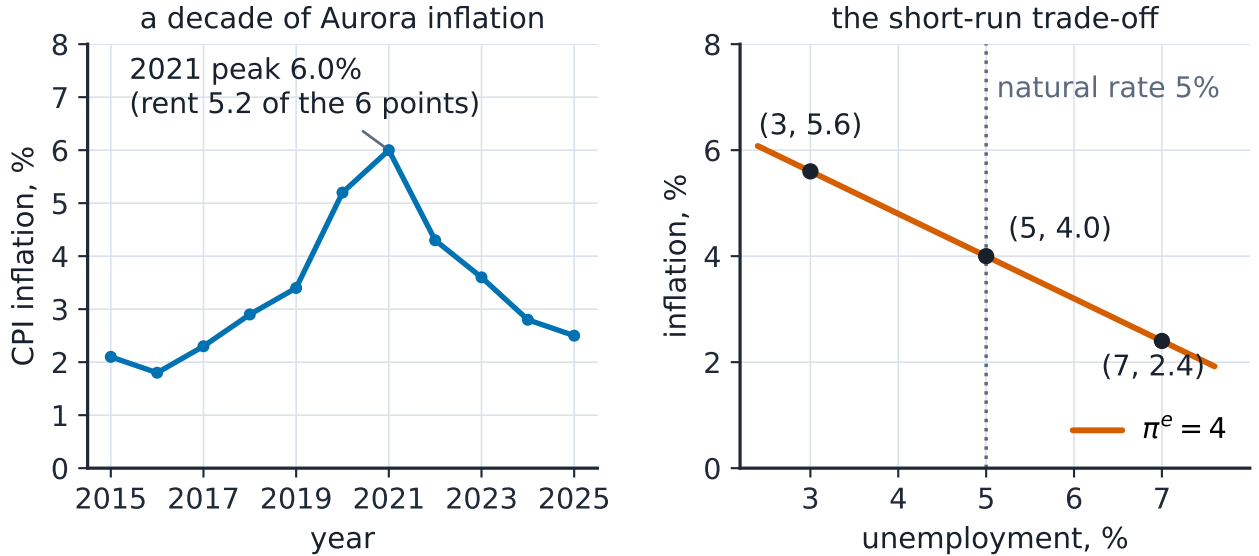




On a log scale, 3.5% growth doubles in 20 years, 1.75% in 40.

Inflation: audit the index

Prices and jobs: an index you can audit, a trade-off that expires



CPI 106.0 means 6% **inflation**; the trade-off holds until expectations move.

Exercises 2.1·2.2

2.1 The reserve ratio is 8%. Compute the multiplier with no cash drain, and the deposits created by a 200 reserve injection. [2]

2.2 Cash drain is now 0.2. Compute the multiplier and the deposits supported by the same 200 of reserves. [3]

Exercises 2.1·2.2

2.1 The reserve ratio is 8%. Compute the multiplier with no cash drain, and the deposits created by a 200 reserve injection. [2]

2.1

- Multiplier $= 1/0.08 =$ **12.5**.
- Deposits $= 200 \times 12.5 =$ **2,500**.

2.2 Cash drain is now 0.2. Compute the multiplier and the deposits supported by the same 200 of reserves. [3]

2.2

- $m = (1 + 0.2)/(0.08 + 0.2) = 1.2/0.28$.
- $=$ **4.29**.
- Deposits $= 200 \times 4.29 =$ **857** (857.1).

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Exercises 2.3·2.4

2.3 With $m = 4.29$ (two decimals), what open-market SALE drains 150 of money? [2]

2.4 The policy rate is 7% and expected inflation is 5%. The ex-ante real rate (two decimals)? What is it if the rate rises to 9%? [3]

Exercises 2.3·2.4

2.3 With $m = 4.29$ (two decimals), what open-market SALE drains 150 of money? [2]

2.3

- Sale $= 150/4.29$.
- $=$ **35** (34.97) – tools interlock: a small reserve operation moves broad money in multiples.

2.4 The policy rate is 7% and expected inflation is 5%. The ex-ante real rate (two decimals)? What is it if the rate rises to 9%? [3]

2.4

- $1.07/1.05 - 1 = \mathbf{1.90}\%$.
- At 9%: $1.09/1.05 - 1 = \mathbf{3.81}\%$.
- The real cost of borrowing doubled from a 2-point nominal move – transmission is arithmetic before it is psychology.

Exercises 2.5·2.6

2.5 In two lines: why does the multiplier's arithmetic limit overstate what banks actually do? [2]

2.6 True or false with one line each: (a) a bank lends its reserves to borrowers; (b) a credit card limit is money; (c) the lending facility exists for orderly times. [3]

Exercises 2.5·2.6

2.5 In two lines: why does the multiplier's arithmetic limit overstate what banks actually do? [2]

2.5

- Banks lend when profitable, creditworthy borrowers exist – the multiplier is a ceiling, not an engine.
- And loan demand, regulation and confidence all shorten the chain the formula assumes runs to completion.

2.6 True or false with one line each: (a) a bank lends its reserves to borrowers; (b) a credit card limit is money; (c) the lending facility exists for orderly times. [3]

2.6

- (a) False – lending creates a deposit; reserves settle payments between banks.
- (b) False – credit pays LATER with money; the limit itself is not money.
- (c) False – it exists for panics, at a penalty price.